R EMARKS/ARGUMENTS

Applicants would like to t ank the Examiner for the careful consideration given the present application. The application has been carefully reviewed in light of the Office action.

Claims 1-12 were rejected under 35 U.S.C. 103(a) as being unpatentable over Caro (USPN 5,830,131). Amended clair 1 recites, "an arithmetic unit for obtaining thickness change between two arbitrary positions am ong a plurality of positions within said vascular wall from a phase detection signal determined it said phase detector, and for obtaining elastic modulus of said vascular wall from said thicl ness, said thickness change and a blood pressure value." Therefore, claim 1 requires an arith netic unit for obtaining an elastic modulus of a vascular wall from the thickness of the vascular wall and from a thickness *change* (e.g., Δh) of the vascular wall.

Caro teaches to determine the arterial elastic modulus using the following equation: $E(P)=[2\rho r(f(P))^2]/h$, where ρ is blo d density, r is vessel radius, P is arterial pressure, and h is wall thickness. Clearly, Caro teach s to determine the arterial elastic modulus from a thickness, h. However, Caro does not teach 1 determine an elastic modulus from a thickness change, as required by claim 1.

Claim 1 further recites, "at east one of a storage unit or a display unit, said storage unit storing changes over time of elastic modulus of said vascular wall when artery is avascularized and the avascularization is then sto ped, and said display unit displaying changes over time of elastic modulus of said vascular w ill when artery is avascularized and the avascularization is then stopped." The Examiner asse ts that these limitations would have been obvious because "Caro discloses that the thickness o a vessel, modulus or the vessel radius can change over time including when blood is flowing th ough it and there is a need to optimize treatments based on

these parameters." Even if the Examiner's assertion is correct, it does not follow that it would be obvious to store or display changes of elastic modulus when the artery is avascularized and then avascularization is stopped. Caro teaches applying an occlusive cuff to a patient to determine a pressure-velocity relationship. However, nothing in Caro suggests storing or displaying elastic modulus changes over time when an artery is avascularized and the avascularization is then stopped. Such a feature allows for the diagnosis of vascular endothelial function with high sensitivity and high accuracy, as disclosed in the present application.

In view of the above-discussed deficiencies of Caro, applicants respectfully submit that claim 1 is allowable over Caro. The arguments provided above are also applicable to claims 2-12.

In light of the foregoing, it is respectfully submitted that the present application is in condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any fees resulting from this communication, please charge same to our Deposit Account No. 16-0820, our Order No.: NIHE-40596.

Respectfully submitted,
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